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(71) Applicant
Dr. Khodayar Rashidi
 17 Springdale Close, Willerby, Hull HU10 6RE

(72) Inventor
Dr. Khodayar Rashidi

(74) Agent and/or Address for Service
Dr. K. Rashidi, 17 Springdale Close, Willerby, Hull HU10 6RE

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 G5C

(54) Modular-display-system

(57) A modular display system, has a printed circuit mother (or main) board 1, containing the main electronic circuitry and components (4) Fig 3 (not shown) and multi-way connection sockets 2 situated along its top and bottom length that accommodates another set of modular printed circuit boards 3 with light emitting diodes 9 so constructed on its surface as to describe or represent an alpha-numeric character which is then switched ON and/or OFF at regular or random intervals/patterns. The printed circuit mother board 1 is extendable along its length and width by attachment of similar boards to connectors 5 and/or 6, so that a word or a sentence of any height or length can be made up by the connection of the light emitting diode-display modules 3 to the said mother board(s). The whole assembly is then placed behind a frosted screen (7) in a frame (8).

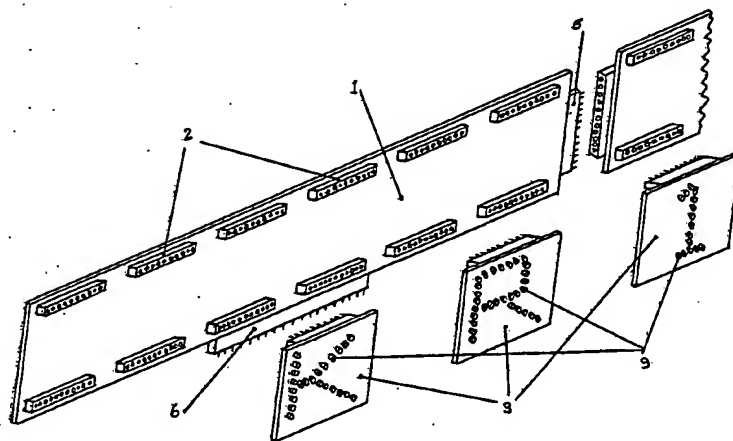
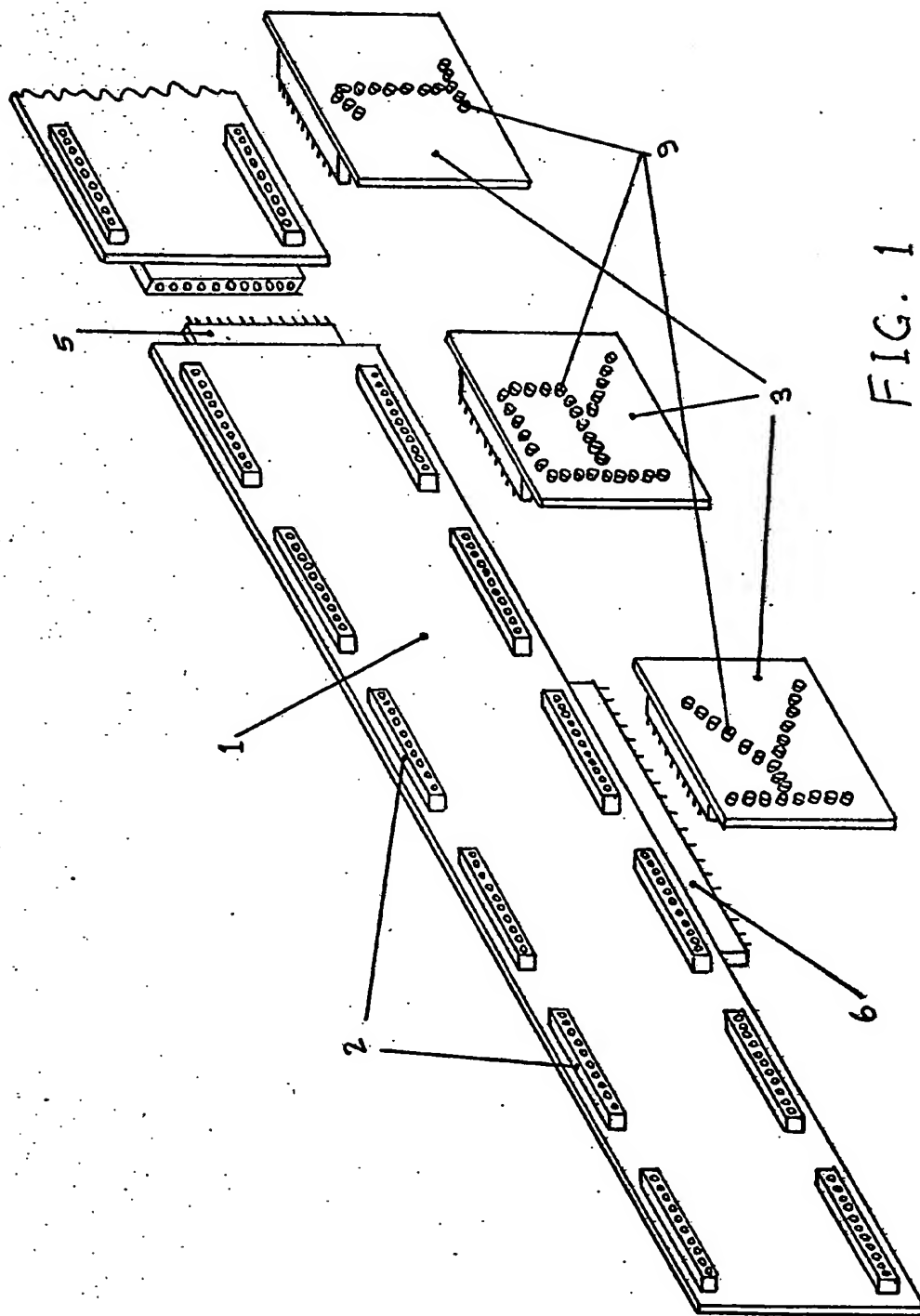
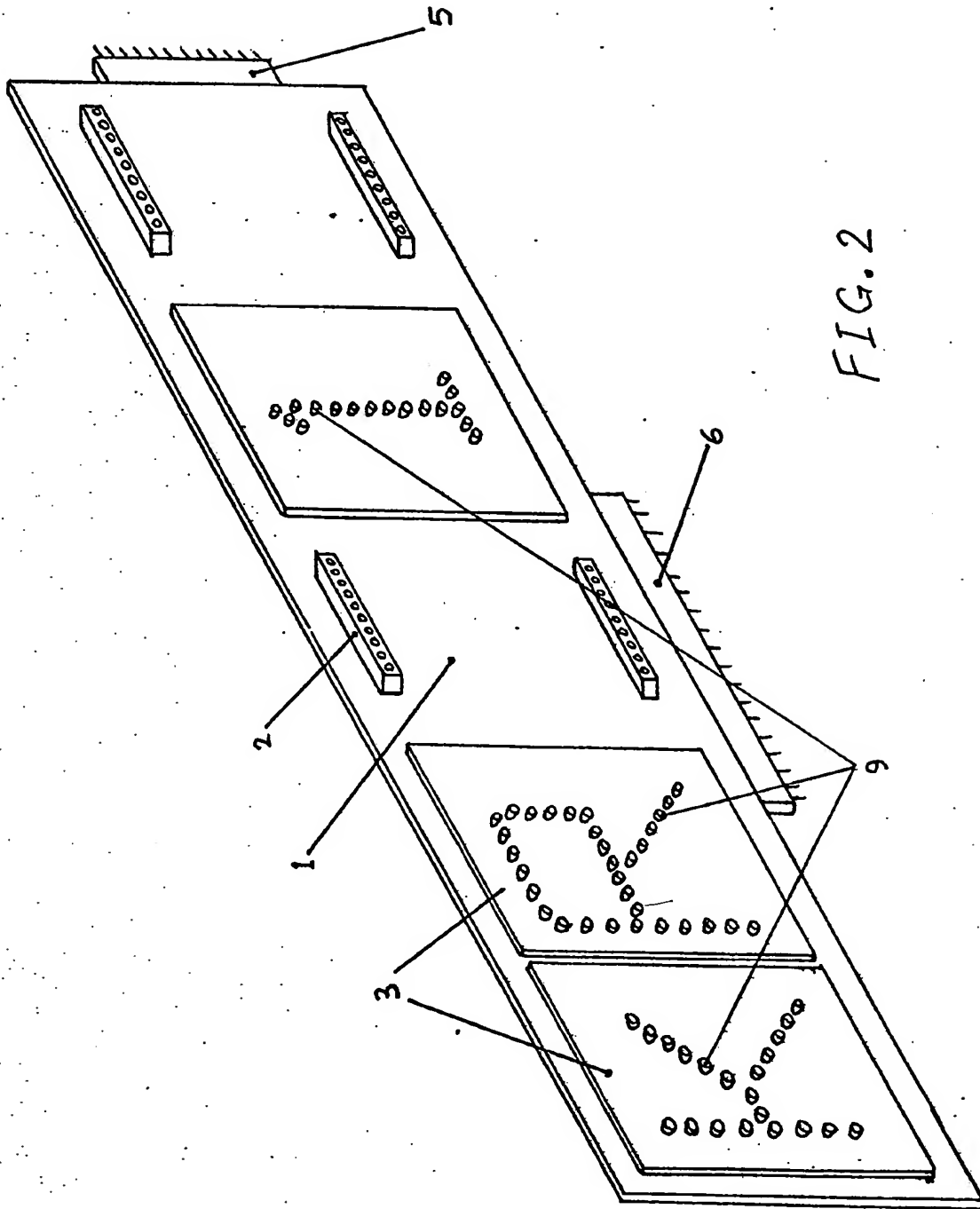


FIG. 1

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FIG. 3

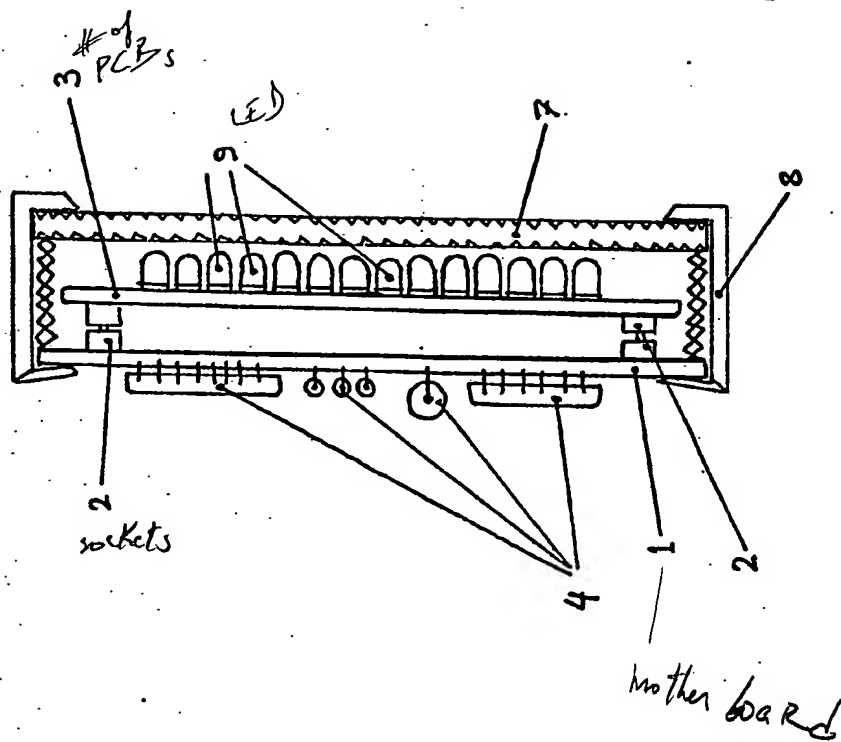
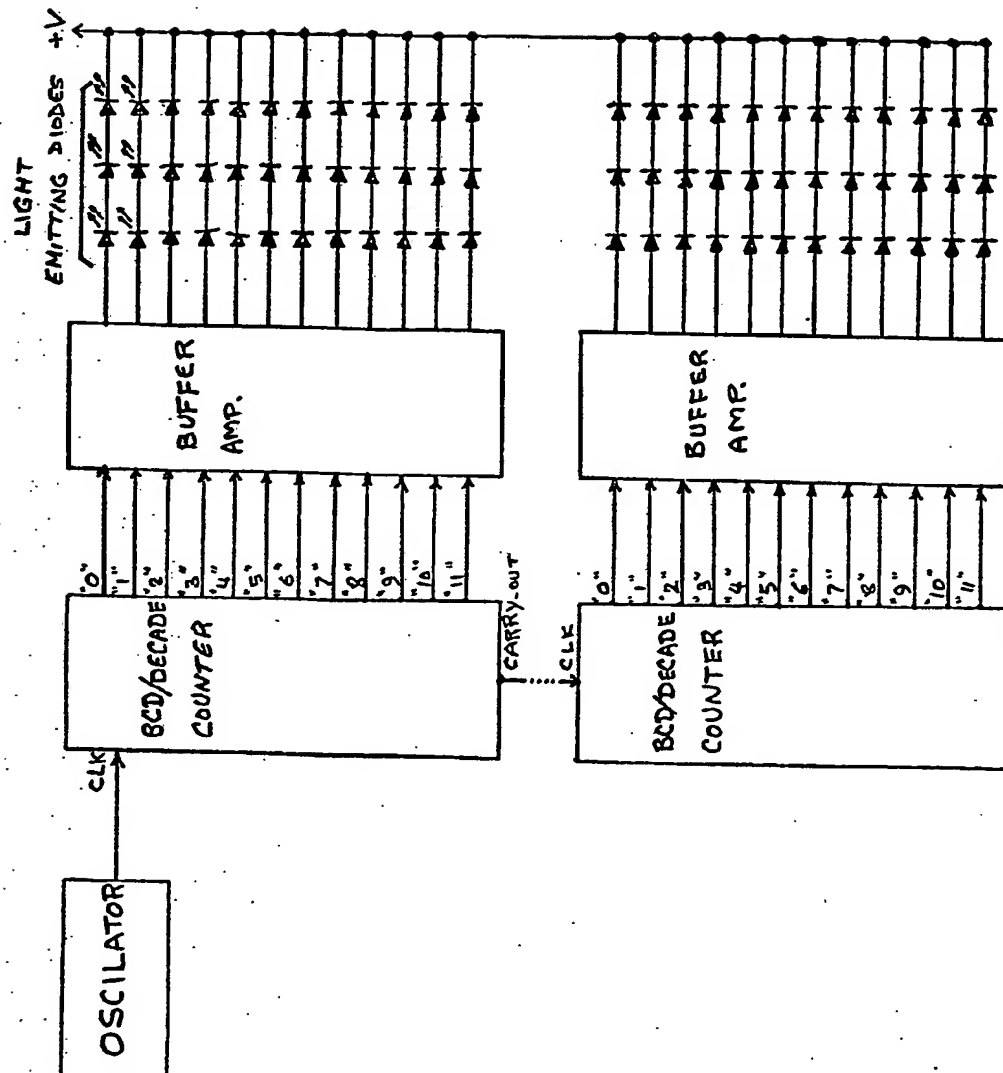


FIG. 4



SPECIFICATION

Modular-display-system

5 This invention relates to a modular display system. Light emitting diodes used in the systems for display of informations are well known and generally used for displaying computer generated characters, whether it be stationary or moving. They have also
10 been used for generating moving pictures in monochrome. Such systems are generally expensive and require more light emitting diodes than necessary in order to display fixed alpha-numeric characters, such as in advertising a product or displaying a
15 company name etc.

According to the present invention there is provided a printed circuit mother board with expansion facilities, comprising of a rectangular board with multi-way connection sockets placed at regular intervals along
20 its top and bottom length which in turn accommodates another set of printed circuit boards with light emitting diodes so constructed on its surface as to describe an alpha-numeric character that is then made to switch ON and/or OFF by electronic circuitry.

25 A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:-

Figure 1 shows in perspective the mother board with multi-way connection sockets and alpha-numeric
30 character boards.

Figure 2 illustrates the method by which the alpha-numeric characters, that are made up of a series of light emitting diodes, are plunged into the multi-way connection sockets.

35 Figure 3 shows in cross-section the complete assembly of the modular display system.

Figure 4 shows a typical block diagram of the electronic circuitry to operate the light emitting diodes.

40 Referring to the drawing of Fig. 1, the mother board 1 comprises multi-way connection sockets 2 which accommodates a number of modular printed circuit boards 3 with light emitting diodes 9 so constructed on its surface as to describe an alpha-numeric
45 character. The light emitting diodes 9 on the character display boards 3 are switched ON and/or OFF by the electronic circuitry 4 (see Fig. 3) situated on the mother board 1. The signals from the mother board are fed to the character display boards 3 via the
50 multi-way connection sockets 2, which also acts as means for supporting the character display modules.

In order to make up a word or a sentence (for example, advertising the name of a product or that of a company) which is to be displayed, appropriate
55 alpha-numeric character display modules are plugged side-by-side into the mother board's multi-way connection sockets until the word is complete. The mother board can also be extended either along its length or width, by connecting more modules of
60 similar type to that of the mother board into connectors 5 and 6 respectively. Referring to Fig. 3 the whole assembly is then placed behind a frosted glass screen 7 and for decorative purposes it is placed inside a frame 8. In order to produce an interesting pattern of
65 lights from the light emitting diodes a typical electro-

nic circuitry is shown in Fig. 4, but many alternatives are possible.

CLAIMS

1. A printed circuit mother board with expansion
70 facilities comprising of a rectangular board with multi-way connection sockets placed at regular intervals along its top and bottom length which in turn accommodates another set of printed circuit boards or modules with light emitting diodes so constructed
75 on its surface as to describe an alpha-numeric character that is then made to switch ON and/or OFF by electronic circuitry.

2. An interchangeable display system made of printed circuit board modules as claimed in claim 1,
80 consisting of light emitting diodes so constructed on its surface as to describe an alpha-numeric character which can be connected into multi-way connection sockets attached to a main electronic circuit board (or so called mother board) that contains the control
85 electronic circuitry.

3. A modular printed circuit mother board with electronic facilities as claimed in claim 1 wherein extension facilities are provided so that other modules of similar size, shape and electronic circuitry can be
90 fitted along its length and width in order to allow a word or a sentence of any length or height be made up by connection of light emitting diode-display modules which describe an alpha-numeric character on its surface, to the said mother board(s).

4. An alpha-numeric display system as claimed in any of the preceding claims that has a number of interchangeable printed circuit display modules consisting of light emitting diodes so constructed on its surface as to describe an alpha-numeric character,
100 that will allow a word or a sentence to be made up by fitting the appropriate alpha-numeric display modules side-by-side to make up that word or sentence.

5. A modular alpha-numeric display system as claimed in any of the preceding claims consisting of
105 light emitting diode-display modules, operated by electronic circuitry to either remain ON or OFF continuously or flashed ON and OFF at regular or random intervals/patterns, placed in a picture frame for decorative purposes, either on its own or behind a
110 frosted screen or items of similar nature.

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